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*Page 4**Amendment*
*Attorney Docket No. E30.2B-11315-US01***Remarks**

This Amendment is in response to the Office Action dated October 10, 2006.

As a preliminary matter, Applicant notes with appreciation the Office's removal of the Vukosic reference.

In the Office Action, the Office rejected claims 1 and 2, alleging the same to be unpatentable under 35 U.S.C. § 103(a) over U.S. Patent No. 5,585,783 to Hall ("Hall").

Next, the Office rejected claims 3, 11, and 13, alleging the same to be unpatentable under 35 U.S.C. § 103(a) over Hall in view of U.S. Patent Application Publication No. 2003/0169164 to Lau ("Lau").

Also, the Office rejected claims 4 – 5, and 7, alleging the same to be unpatentable under 35 U.S.C. § 103(a) over Hall in view of Lau and U.S. Patent No. 3,911,430 to Jankowski et al. ("Jankowski").

Next, the Office rejected claim 6, alleging the same to be unpatentable under 35 U.S.C. § 103(a) over Hall in view of Lau, Jankowski, and U.S. Patent No. 5,708,428 to Phillips ("Phillips").

Also, the Office rejected claim 12, alleging the same to be unpatentable under 35 U.S.C. § 103(a) over Hall in view of Lau and U.S. Patent No. 5,422,623 to Bader et al. ("Bader").

Finally, claims 8 – 10 and 14 – 17 were objected to as being dependent upon a rejected base claim, but were said to be allowable if rewritten in independent form.

The following comments are presented in the same order and with paragraph numbers corresponding to the rejections in the Office Action.

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Claims Rejections—35 U.S.C. § 103(a)

1. The Office rejected claims 1 and 2, alleging the same to be unpatentable under 35 U.S.C. § 103(a) over Hall. Applicant respectfully disagrees.

The Office states that Hall discloses, “control means (col. 6, line 6) to produce two different warning light signals in one combination consisting of flashing and rotational beacon sequencing (col. 7, lines 55-61)...” Applicant respectfully traverses this assertion.

Applicant directs the Office’s attention to FIG. 5 of Hall. Figure 5 of Hall is a block diagram of the separate flashing circuitry, separate continuous illumination circuitry, and separate sequencing circuitry used in accordance with the Hall specification to produce the desired **singular flashing or non-flashing** light pattern. Figure 5 of Hall discloses three unique and separate pathways for power to be provided to a light array: in the left pathway, the power source is connected to a light array via a flasher circuit; in the separate and distinct middle pathway, the power source is connected directly to a light array, thereby providing constant power to the entire light array, such as turning on a light switch; and in the separate and distinct right pathway, the power source is connected to a light array via a sequencer circuit.

Applicant asserts that the left pathway of FIG. 5 of Hall discloses a single light signal, namely a flashing light signal.

Applicant asserts that the middle pathway of FIG. 5 of Hall discloses a single light signal, namely a light signal that is continuously on when power is applied.

Applicant asserts that the right pathway of FIG. 5 of Hall discloses a single light signal, namely a sequencing light signal through a sequencer circuit.

Figure 5 of Hall does not show that any of these three pathways may be used in conjunction with one another. Figure 5 of Hall does not disclose “a controller in electric

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communication with said light emitting diodes, the controller constructed and arranged to activate said light emitting diodes to produce at least two different warning light signals in at least one combination," as recited in instant claim 1.

Applicant's analysis of FIG. 5 is consistent with, and is supported by, a review of the Hall specification which states at column 3, lines 54-59 "a presently preferred embodiment of the present invention further includes an electronic circuit integral with or carried on the bendable circuit board for continuously illuminating the array of light emitting diodes or for intermittently turning the array of light emitting diodes on and off at a predetermined interval so as to provide a flashing light." (Emphasis added).

The Hall specification also states at column 3, lines 64-67 that "an electronic sequencer circuit is carried on the bendable printed circuit board for intermittently turning the light emitting diodes on and off at predetermined time intervals to provide the appearance of a rotating beacon."

The Hall specification also states at column 6, lines 4-7 that "the other end of the each string is either connected by means of negative lead 20, to negative terminal 20a of power source 28, or, in the alternative, to a control circuit, which can either be a flasher circuit 36 or a sequencer circuit 38." (Emphasis added).

The Hall specification also states at column 6, lines 12-14 that "connection directly to negative terminal 20a results in continuous illumination of the light emitting diodes." (Emphasis added).

The Hall specification also states at column 6, lines 28-31 that "other suitable switches such as a three-way switch and the like may be employed to allow one to choose between a flashing LED pattern and a steady-on state in addition to being able to turn off the

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device.” (Emphasis added).

The Hall specification also states at column 7, lines 57-61 that the marker light **“most preferably, includes sequencer circuit 38 instead of flasher circuit 36.”** Accordingly, sequencer circuit 38 causes LEDs 1-40 to intermittently turn on and off at predetermined time intervals to provide the appearance of a rotating beacon.” (Emphasis added.)

All of the above statements from the Hall specification are consistent and disclose nothing more than a separate flasher circuit, a separate sequencer circuit, a separate continuous circuit, and a manual switch to activate **one and only one** of the circuits at any given time. In addition, all of the above statements from the Hall specification are silent and fail to disclose that a light signal may change from one light signal to another light signal without human activation of a switch. The specification of the Hall reference is completely silent and fails to teach, suggest, or disclose “a controller in electric communication with said light emitting diodes, the controller constructed and arranged to activate said light emitting diodes to **produce at least two different warning light signals in at least one combination**”, as recited in instant claim 1. (Emphasis added).

The Hall specification at column 3, lines 53-59; column 6, lines 12-14; column 6, lines 28-31; column 7, lines 41-49; column 7, lines 57-61; and column 8, lines 6-7 in conjunction with FIG. 3 all indicate that **all** LEDs 16 in the array or as on circuit board 32, namely LEDs 1-40, provide **only one light signal at a time**, where the individual signal may be continuous, flashing, or sequencing. Because Hall can produce only one light signal at a time, Hall **cannot** activate “light emitting diodes to produce **at least two different** warning light signals **in at least one combination**”. (Emphasis added).

Additionally, Figure 3 of the Hall reference discloses a device U1 which

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simultaneously controls all LEDs 1-40. A slightly modified version of FIG. 3 is presented below:

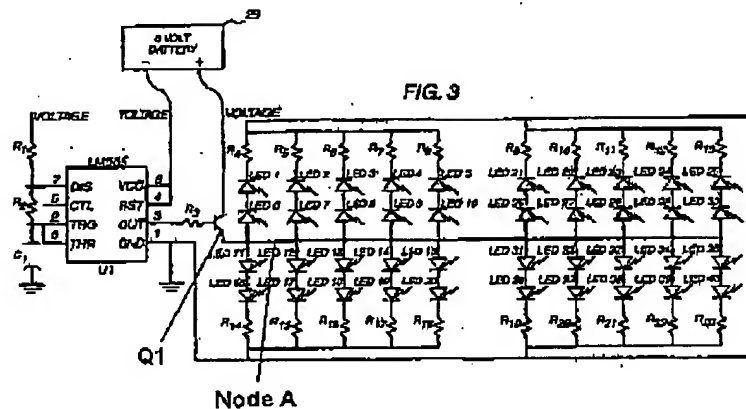


Figure 3 of Hall discloses one, and only one, output labeled as OUT pin 3 of U1. In addition, the Hall specification states at column 5, lines 20-25 that device U1 is an industry standard LM555 stable multi-vibrator circuit with driver transistor. The electrical specifications and description of the industry standard 555 circuit state that it includes only a single output. The existence of only a single output on the industry standard 555 circuit physically restricts and limits the circuit to the illumination of a single light signal at any time. It is impossible for the circuit in Figure 3 of Hall and/or device U1 to illuminate more than one light signal at a time. It is also impossible for the circuit of Figure 3 of Hall and/or the device U1 to change light signals without activation of a switch through human intervention. The circuit of Figure 3 of the Hall reference and/or the industry standard 555 circuit U1 are physically incapable of producing at least two different warning light signals in at least one combination.

The device U1 permits current to flow from the battery to transistor "Q1".

Electricity flows through "Q1" to "Node A" when U1 provides the output signal at U1 pin 3.

Each string of LEDs is in electrical communication with "Node A". Current flows to each

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column of two LEDs as drawn above "Node A" (e.g. LEDs 1 and 6, LEDs 2 and 7) and simultaneously to each column of two LEDs as drawn below "Node A" (e.g. LEDs 11 and 16, LEDs 12 and 17) on each individual string at the same time.

The circuit of Figure 3 depicts all LEDs 1-40 receiving power at the same time from pin 3 of U1 **for illumination of the identical light signal within all of the LEDs of the array.** Hall only discloses the use of a single output which limits the Hall device to a single light signal at a time. All LEDs 1-40 are connected to "Node A", either directly or indirectly through another LED, which is the only electrical connection to circuit U1. All ten strings of LEDs must illuminate simultaneously with the same signal when an output signal appears at U1 pin 3.

It is not electrically possible for the circuit depicted in Figure 3 to selectively turn on individual strings of LEDs because all of the strings containing LEDs are commonly connected to "Node A". In addition, there exists a total absence of separate electrical connections of each string of LEDs to a source of power other than "Node A". "Node A" receives **one and only one** signal from U1. All LEDs 1-40 are energized upon the application of power to provide an identical light signal.

There is no teaching or suggestion in Hall to provide a circuit that provides at least two different warning light signals in at least one combination. As mentioned above, the Hall specification states at column 6, lines 28-31 that "other suitable switches such as a three-way switch and the like may be employed to allow one to **choose between a flashing LED pattern and a steady-on state** in addition to being able to turn off the device." (Emphasis added). Therefore, Hall teaches choosing between a flashing LED pattern and a steady-on state and does not suggest the desirability, or capability of producing those two different light signals in at least one combination.

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Furthermore, Hall teaches at column 6, lines 4-7 that "the other end of each string is either connected by means of negative lead 20, to negative terminal 20a of power source 28, or, in the alternative, to a control circuit, which can either be a flasher circuit 36 or a sequencer circuit 38." (Emphasis added). That is, a flasher circuit and sequencer circuit *cannot be used together*.

Finally, Hall teaches away from the claimed invention. The Hall specification states at column 7, lines 57-61 that the warning light circuit "most preferably, includes sequencer circuit 38 instead of flasher circuit 36." (Emphasis added). This statement, read together with the statement in Hall at column 6, lines 28-31 that "other suitable switches such as a three-way switch and the like may be employed to allow one to choose between a flashing LED pattern and a steady-on state in addition to being able to turn off the device," teach that it is either undesirable, or not possible, with the Hall device to produce at least two different warning light signals in at least one combination. Hall teaches that the end user must choose a single light signal to be produced.

In light of the arguments presented above, Applicant respectfully traverses the assertion that claims 1 and 2 are obvious under §103(a) over Hall and requests withdrawal of the rejections.

2. The Office rejected claims 3, 11, and 13, alleging the same to be unpatentable under 35 U.S.C. § 103(a) over Hall in view of Lau. Applicant respectfully disagrees.

In two previous amendments, Applicant has argued that Lau is not available as a reference because instant claim 1 of the present application has a priority date of August 4, 1999 while the Lau reference has a filing date of March 5, 2002.

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The Office has responded by stating that Applicant's remarks regarding Lau's priority date are not convincing because Applicant did not indicate where the claimed features allegedly taught by Lau are shown in document on which priority is based. Applicant directs the Office's attention to Provisional Patent Application Ser. No. 60/147,204 filed August 4, 1999, specifically the following non-limiting locations: pg. 65, second full paragraph; pg. 65, third full paragraph; pg. 65-66, the paragraph spanning the two pages; figure 44, reference no. 572; and figure 46, reference no. 572.

In the specification at pg. 65, the second full paragraph states that "[a]n end cap 572 is preferably secured to each end of the base 562. Each end 572 is preferably the location for positioning of the LED alley lights 502..."

In the specification at pg. 65, the third full paragraph states that "[t]he end caps 572 preferably provide for visualization of the LED light bar 560 from either the passenger or driver side of an emergency vehicle."

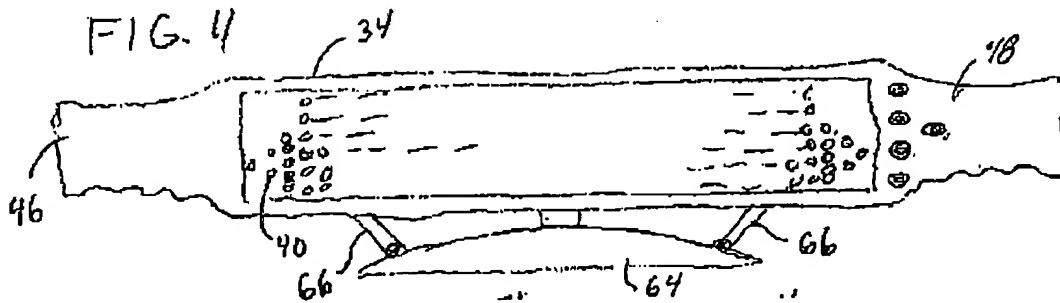
In the specification at pgs. 65-66, the paragraph spanning the pages states that "[t]he LED alley lights 502 as earlier described are preferably integral to and/or fixed within each end cap 572."

Applicant respectfully traverses the use of the Lau reference because the above disclosure from the Provisional Patent of August 4, 1999 antedates any disclosure that is alleged to be found in Lau.

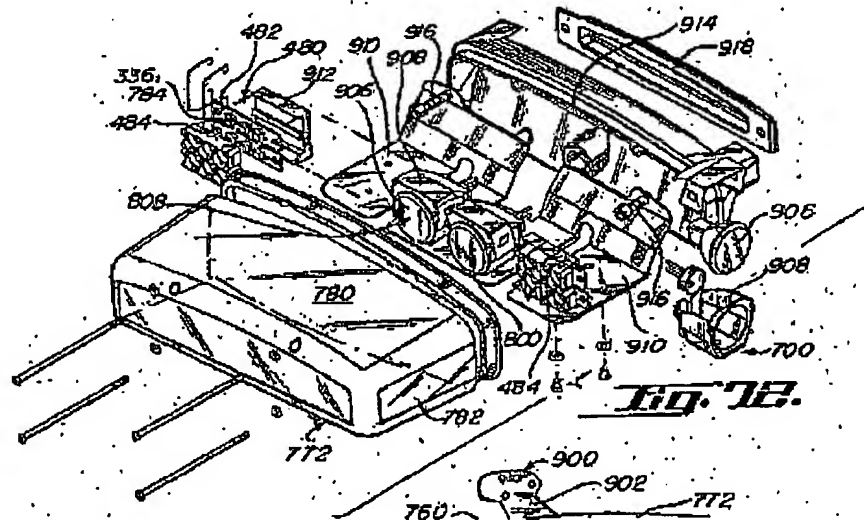
Regardless of the priority date, Lau does not disclose a light bar assembly with "opposite ends and an end cap assembly engaged to each of said opposite ends". The Office directs Applicant's attention, generally, to FIG. 11 of Lau to support the alleged disclosure of end caps. Shown below is FIG. 11 of Lau:

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Presumably the Office is referring to reference numbers 46 and 48 when it alleges that FIG. 11 discloses end cap assemblies because no specific reference numbers were given in the Office Action. However, as stated in the Lau specification in a number of locations, including paragraph 0054, reference numbers 46 and 48 point to handles. A handle is not an end cap assembly. One embodiment of an end cap assembly 772 is shown below:



As stated in the instant application at paragraph 0398, "Each end cap 772 encloses the take-down light 700 and alley lights 800, 808." (Emphasis added.) Also at paragraph 0398, "The end caps 772 provide for visualization of the LED light bar 760 from the sides of an emergency vehicle." (Emphasis added.)

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There is no teaching or suggestion in Lau to include a take-down light and an alley light in the handles 46, 48. And, there is no teaching or suggestion in Lau to provide for visualization of the LEDs from the sides of the signaling device. Therefore, handles 46 and 48 of Lau cannot be considered end-cap assemblies, as in the instant application.

As argued above, Hall fails to teach or suggest all of the elements of base claim 1. And, Lau fails to teach or suggest the use of an end cap assembly, as recited in claim 3. Combining Hall with Lau or Lau with Hall therefore does not produce the warning signal light bar of claims 3 regardless of Lau's priority date. Because claims 11 and 13 depend from claim 3, which is nonobvious, they too are nonobvious.

In light of the arguments presented above, Applicant respectfully traverses the assertion that claims 3, 11 and 13 are obvious under §103(a) over Hall in view of Lau and requests withdrawal of the rejections.

3. The Office rejected claims 4 – 5, and 7, alleging the same to be unpatentable under 35 U.S.C. § 103(a) over Hall in view of Lau and Jankowski. Applicant respectfully disagrees.

As argued previously, Hall combined with Lau or Lau combined with Hall fails to produce the invention claimed in instant claim 3, from which claims 4, 5, and 7 depend. The addition of any light pipes or light spreaders allegedly disclosed in Jankowski does nothing to address the failure of Hall and Lau to teach or suggest all the elements of claim 3, namely the end cap assemblies. Therefore, combining Jankowski with Hall and Lau does not produce the warning signal light bars claimed in claims 4, 5, and 7.

In light of the arguments presented above, Applicant respectfully traverses the

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assertion that claims 4, 5 and 7 are obvious under §103(a) over Hall in view of Lau and Jankowski and requests withdrawal of the rejections.

4. The Office rejected claim 6, alleging the same to be unpatentable under 35 U.S.C. § 103(a) over Hall in view of Lau, Jankowski, and Phillips. Applicant respectfully disagrees.

As argued previously, Hall combined with Lau and Jankowski fails to produce the invention claimed in instant claim 4, from which claim 6 depends. The addition of any couplers and pockets allegedly disclosed in Phillips does nothing to address the failure of Hall and Lau and Jankowski to teach or suggest all the elements of claim 4. Therefore, combining Phillips with Hall and Lau and Jankowski does not produce the warning signal light bar presented in claim 6.

Furthermore, the inventions of Hall, Lau, Jankowski, and Phillips are individually complete and functional by themselves. The Office has provided no reason(s) to use elements from or add or substitute parts to any of the cited references. For instance, for what purpose would the couplers and pockets allegedly described in Phillips be used with any of the other cited references? That is, even if the couplers and pockets allegedly described in Phillips could be combined with Hall, Lau, or Jankowski (which Applicant believes they could not), why would it be done? There is no teaching, suggestion, or motivation provided in Hall, Lau, or Jankowski that would lead one of ordinary skill in the art that couplers or pockets would be desirable.

Furthermore, it is physically impossible to combine Hall with the alleged couplers and pockets of Phillips. The LEDs 16 of Hall are attached directly to the circuit board 22, so a complete redesign would be required. And to what end? Why is it desirable to have couplers and pockets incorporated into the functionally complete design of Hall? There are a number of

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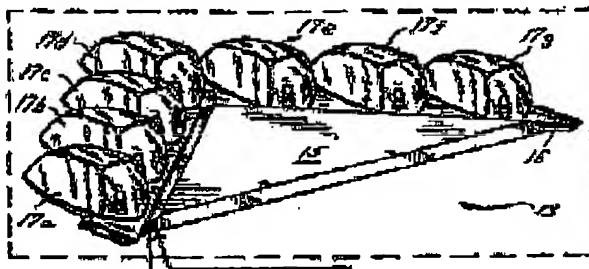
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reasons why couplers and pockets would be undesirable in the design of Hall, not the least of which is a space constraint. Including couplers and pockets in the design would require changing the size of light source housing 24. This in turn would force a redesign of the location of the switch 29.

In light of the arguments presented above, Applicant respectfully traverses the assertion that claim 6 is obvious under §103(a) over Hall in view of Lau and Jankowski and Phillips and requests withdrawal of the rejection.

6. The Office rejected claim 12, alleging the same to be unpatentable under 35 U.S.C. § 103(a) over Hall in view of Lau and Bader. Applicant respectfully disagrees.

Bader does not disclose the use of end cap assemblies, as required by claim 12. Rather, Bader discloses "a light bar 13 comprising a plurality of like modules 17(a)-17(g) housing signaling devices..." [column 6, lines 8-9] (Emphasis added). Like modules 17(a)-17(g) of Fig. 2 of Bader are shown below:



As stated in the instant application at paragraph 0398, "Each end cap 772 encloses the take-down light 700 and alley lights 800, 808." (Emphasis added.) Also at paragraph 0398, "The end caps 772 provide for visualization of the LED light bar 760 from the sides of an emergency vehicle." (Emphasis added.) There is no teaching or suggestion in Bader to

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provide take-down lights and alley lights in an end-cap assembly. Module 17(d) cannot have an alley light because the light would be blocked by surrounding modules 17(c) or 17(e). And, since the modules are identical, the modules at the ends 17(a) and 17(g) do not have alley lights. Therefore, Bader does not have end cap assemblies, unlike the instant application.

As argued above, Hall fails to teach or suggest all of the elements of base claim 1. And, both Lau and Bader fail to teach or suggest the use of an end cap assembly, as required by claim 12. Whether or not it would have been obvious to use a halogen light does nothing to address the failure of Hall combined with Lau and Bader to produce the embodiment recited in claim 12.

In light of the arguments presented above, Applicant respectfully traverses the assertion that claim 12 is obvious under §103(a) over Hall in view of Lau and Bader and requests withdrawal of the rejection.

6. Applicant notes with appreciation that the Office has determined that claims 8-10 and 14-17 contain allowable subject matter if rewritten in independent form. Respectfully, Applicant believes that claims 1 and 3 contain allowable subject matter and as such, will prosecute claims 8-10 and 14-17 as dependent claims.

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Conclusion

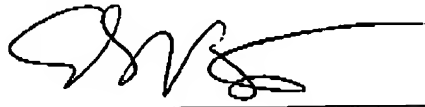
In light of the arguments presented above, Applicant believes that the instant application is in condition for allowance. Prompt action to that effect is earnestly solicited.

Should the Examiner believe that anything further is required to put the application in condition for allowance, he is invited to contact the Applicant's undersigned representative at the telephone number listed below.

Respectfully submitted,

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